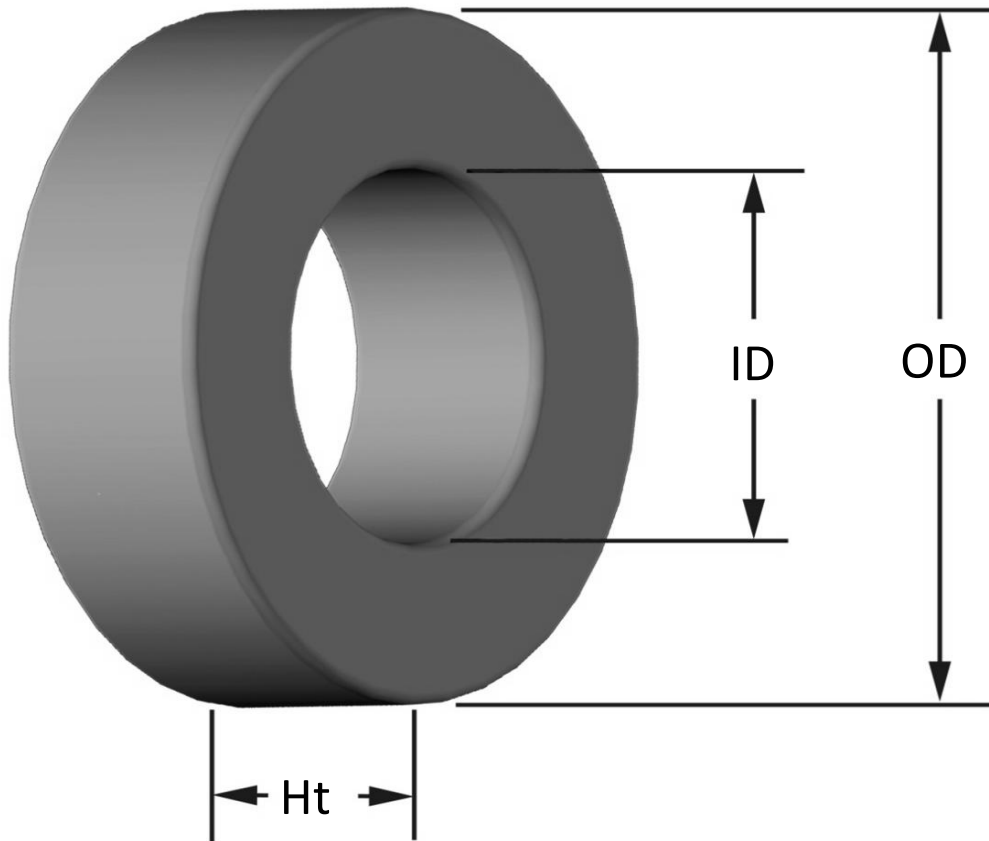




**Part Number:** **T20-63**

Revision 20190524 - Generated 2019-May-30



|                            |  |                        |                      |
|----------------------------|--|------------------------|----------------------|
| <b>OD</b>                  | (nom. - bare core)<br>(max. - after coating)   | 5.08 mm<br>5.33 mm     | 0.200 in<br>0.210 in |
| <b>ID</b>                  | (nom. - bare core)<br>(min. - after coating)   | 2.24 mm<br>1.98 mm     | 0.088 in<br>0.078 in |
| <b>Ht</b>                  | (nom. - bare core)<br>(max. - after coating)   | 1.78 mm<br>2.03 mm     | 0.070 in<br>0.080 in |
| <b>Mass</b>                | (approximate)  | 0.15 grams             |                      |
| <b>Magnetic Dimensions</b> | A <sub>e</sub> - Eff. Mag. Cross Section   | 0.0230 cm <sup>2</sup> |                      |
|                            | L <sub>e</sub> - Eff. Mag. Path Length   | 1.15 cm                |                      |
|                            | V <sub>e</sub> - Eff. Core Volume  | 0.0260 cm <sup>3</sup> |                      |
|                            | WA - Min. Eff. Window Area   | 0.0308 cm <sup>2</sup> |                      |
|                            | sa - Surface Area  | 0.962 cm <sup>2</sup>  |                      |
|                            | mlt - mean length per turn   | 0.841 cm               |                      |
| <b>Inductance</b>          | μ <sub>i</sub> (reference)   | 35                     |                      |
|                            | A <sub>L</sub> value (nominal)   | 7.8 nH/N <sup>2</sup>  |                      |
|                            | Test Winding   | N=50, #36 AWG          |                      |
|                            | Frequency  | 10 kHz                 |                      |
|                            | Voltage on Agilent 4284A   | 0.005 V                |                      |
| A <sub>L</sub> tolerance   | ±10%   |                        |                      |
| <b>Core Loss</b>           | $\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$ |                        |                      |
|                            | where B <sub>pk</sub> expressed in gauss, f expressed in hertz, and:<br>a=9.94E+08, b=2.56E+08, c=1.00E+04, d=3.34E-15                             |                        |                      |
|                            | B <sub>pk</sub>  | 140 G                  |                      |
|                            | frequency  | 100 kHz                |                      |
|                            | Core Loss (nominal)  | 31 mW/cm <sup>3</sup>  |                      |
| Core Loss (maximum)        | 35 mW/cm <sup>3</sup>  |                        |                      |
| <b>DC Saturation</b>       | $\% \mu_i = \frac{1}{a + b \cdot H^c} + d$   |                        |                      |
|                            | where H expressed in oersteds, and:<br>a=1.00E-02, b=1.29E-05, c=1.24, d=0.00  |                        |                      |
|                            | H <sub>DC</sub>  | 200 Oe                 |                      |
|                            | Percent Initial Perm(nom.)   | 51.7%                  |                      |
| Percent Initial Perm(min.) | 46.1%  |                        |                      |
| <b>Coating/Pkg</b>         | Coating Type:  | Parylene C             |                      |
|                            | Voltage Breakdown (min.)   | 500 Vrms, 60Hz         |                      |
|                            | Limit  | 3 mA, 5 s              |                      |
|                            | Package Quantity   | 100,000 Pcs/Box        |                      |

|                      |                     |        |        |         |         |         |         |         |       |       |       |      |      |
|----------------------|---------------------|--------|--------|---------|---------|---------|---------|---------|-------|-------|-------|------|------|
| <b>Winding Table</b> | <b>Wire Size</b>    | AWG    | 28     | 30      | 32      | 34      | 36      | 38      | 40    | 42    | 44    | #N/A | #N/A |
|                      |                     | mm     | 0.315  | 0.250   | 0.200   | 0.160   | 0.125   | 0.100   | 0.080 | 0.063 | 0.050 | #N/A | #N/A |
|                      | <b>Single Layer</b> | Turns  | 12     | 16      | 20      | 26      | 33      | 42      | 52    | 66    | 83    | #N/A | #N/A |
|                      |                     | Rdc(Ω) | 21.5 m | 45.5 m  | 90.5 m  | 187.2 m | 377.8 m | 764.7 m | 1.5   | 3.0   | 6.1   | #N/A | #N/A |
| <b>Full Winding</b>  | Turns               | 13     | 20     | 30      | 47      | 73      | 113     | 175     | 271   | 419   | #N/A  | #N/A |      |
|                      | Rdc(Ω)              | 23.3 m | 56.9 m | 135.8 m | 338.3 m | 835.7 m | 2.1     | 5.1     | 12.5  | 30.7  | #N/A  | #N/A |      |

